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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,602	01/23/2002	Akiko Miyakawa	1642.1002	6562

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EXAMINER

BISSETT, MELANIE D

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

571

**Office Action Summary**

Application No.

10/031,602

Applicant(s)

MIYAKAWA ET AL.

Examiner

Melanie D. Bissett

Art Unit

1711

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,5,7-22,31-39 and 41-47 is/are pending in the application.
- 4a) Of the above claim(s) 20-22,31-39 and 41-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5 and 7-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/02,2/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

- a. Group I, claim(s) 1, 5, and 7-19, drawn to an optical element.
  - b. Group II, claim(s) 20-22, 31-39, and 41-47, drawn to a process for producing an optical element.
2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The claims in Group I rely on specific properties as the special technical feature of the invention. However, the claims in Group II rely on specific steps of curing and molding as the special technical feature of the invention.
3. During a telephone conversation with David Pitcher on 13 February 2004 a provisional election was made without traverse to prosecute the invention of Group I, claims 1, 5, and 7-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 20-22, 31-39, and 41-47 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Art Unit: 1711

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Objections***

5. Claims 12 and 15 are objected to because of the following informalities:
6. Claim 12 appears to contain two formulae, although the claim only refers to formula (1). It is suggested that the second urethane-containing formula be removed from claim 12.
7. Claim 15 contains a period in the middle of the claim, just before formula (3). It is suggested that this period be removed.
8. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:
- The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
10. Claims 1, 5, and 7-19 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a resin layer having a visible light inner transmittance of 95% or more in a 100  $\mu\text{m}$  thick area (p. 7 lines 13-15), does not

Art Unit: 1711

reasonably provide enablement for a resin layer having a visible light inner transmittance of 95% or more in a 100 *mm* thick area. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. It is suggested that the claim be amended to reflect the transmittance properties supported by the specification.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1, 9, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Fong et al.

13. Fong teaches optical products comprising a base and optical layer, where the optical layer has a refractive index of at least 1.55 (abstract; col. 4 line 59-col. 5 line 3). The optical layers are polymerized and cured by use of UV light and a photoinitiator (col. 11 lines 45-65). Examples show composite films having refractive indices of

Art Unit: 1711

1.5890-1.5975, where the films are made from uncured resins having refractive indices of 1.5592-1.5755 (Table 3).

14. Claims 1, 5, 7-8, 10-12, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin et al.

15. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

16. Lin teaches radiation-curable fiber optic coatings comprising photoinitiators (abstract; col. 4 lines 22-32). Reactive diluents include ethoxylated bisphenol-A diacrylate (col. 5 lines 53-67). Thus, the reference teaches the use of polyfunctional acrylates fitting the applicant's Formula (1). When the coatings are used as outer primary coatings, the glass transition temperature may be adjusted to be as high as 120 °C (col. 17 lines 39-48). Examples 7 and 8 show compositions of polyether aromatic urethane acrylate and a bisphenol A epoxy acrylate oligomers, which are mixed with photoinitiators. Small doses of radiation are needed to obtain 95% cure, showing that gel percentages of 95% or more are easily obtainable (Table 1). Because the reference teaches the use of similar reactants and curing processes as those of the applicant's claimed invention, it is the examiner's position that the coatings formed by Lin would have the same shrinkage rate upon curing as the applicant's claimed invention. Also, because the reactive diluent used in the reference is the same as the polyfunctional

Art Unit: 1711

acrylate employed by the applicant's claimed invention, it is the examiner's position that the material would inherently have the claimed refractive index before curing.

17. Claims 1, 7-8, and 13-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Canon. The translation of JP 62-258401, from the applicant's Form PTO-1449, is being provided. Page numbers cited by the examiner refer to the translation.

18. Canon teaches UV-curing coatings for glass aspherical lenses, where the coatings comprise a urethane-modified polyester (meth)acrylate, a polyfunctional (meth)acrylate, and a photopolymerization initiator (abstract). The lenses are useful in photographic lenses (still cameras) and video cameras (p. 2-p. 3). The polyurethane acrylates fit the applicant's formula (2), where polyester polyol residuals are present, isocyanate residuals are present, and hydroxyalkyl (meth)acrylates are added to the ends of the polyester urethane (p. 8-9). Trifunctional (meth)acrylates include those having molecular weights below 1000 g/mol (p. 9-10). Since the polyurethane (meth)acrylates are the same as those employed by the applicant, it is the examiner's position that the materials would inherently possess the same starting refractive index as that claimed by the applicant. Also, since the materials used in the coating are the same as those claimed by the applicant, it is the examiner's position that the coating would inherently possess the same starting refractive index as that claimed by the applicant. The coatings are shown to have no change when subjected to high humidity and temperature; thus, it is the examiner's position that the reference teaches

Art Unit: 1711

hydroscopic dimensional change of less than 0.4% (Table 1). Also, the examples show high pencil hardness and low shrinkage upon curing (Table 1).

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al.

21. Lin applies as above, teaching the use of diacrylate reactive diluents but failing to teach the molecular weight of such a material. The reactive diluents are shown to be used to adjust viscosity, where the diluent is a low viscosity monomer (col. 5 lines 8-17). Thus, it would have been prima facie obvious to choose a reactive diluent having a low molecular weight to optimize the viscosity reducing properties of the diluent.

22. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Canon in view of Sato.

23. Canon teaches aspherical lenses for cameras; however, the reference does not specify the use of the coatings on lenses for interchangeable lenses. Sato teaches that interchangeable lenses with aspherical properties are well-known in the art, where interchangeable lenses are used to provide extra magnification to a standard 35-mm camera (col. 1 lines 10-23). Thus, it would have been prima facie obvious to use the



Art Unit: 1711

coatings of Canon's teaching for an interchangeable lens to provide standard cameras with extra magnification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mdb



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